Remarks/arguments

Claims 1-66 are pending. Claims 61-65 have been withdrawn.

The rejections under 35 U.S.C. § 103(a)

Claims 1-60 and 66 have been rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 4,772,473 in view of U.S. Patent Publication No. 2003/0180359 or U.S. Patent No. 4,792,452 and U.S. Patent No. 5,415,871.

According to the Examiner, the '473 patent discloses all of the limitations of the instant claims except for the controlled release excipients (Office Action, p. 3), a tablet, and the specific percentages (Office Action, p. 4). The Examiner contends that the '359 publication discloses multi-layer dosage forms such as caplets and tablets; and controlled release polymers/excipients such as PVP, HPMC, carboxyvinylpolymers, alginic acid and derivatives such as sodium alginate. According to the Examiner, the '452 patent discloses a controlled release formulation including polymers of alginic acid such as sodium alginate and HPMC. Further, according to the Examiner, the '871 patent discloses that sustained release polymers include sodium alginate or alginic acid and HPMC, and that they can be formulated into any solid dosage form, such as a gelatin capsule or tablet.

The Examiner contends that it would have been obvious to substitute the sustained release polymers and/or tablet form of the '359 publication or '452 and '871 patents for the polymers and/or capsule in the '473 product with predictable results. Further, "[s]uch a substitution of one sustained release polymer of another sustained release polymer is within the purview of the skilled artisan and would yield predictable results." Office Action, p. 5. The Examiner further states that adjusting the percent of a compound in the formulation "is simple optimization." *Id.*

Applicants respectfully traverse this rejection. The instant claims are directed to an orally administrable nitrofurantoin formulation which includes a first controlled release component comprising nitrofurantoin monohydrate, sodium alginate, alginic acid, and hypromellose. The only prior art reference disclosing nitrofurantoin is the '473 patent, which does not disclose the instantly claimed controlled release excipients. Instead, the '473 patent

states that "polyvinylpyrrolidone is a necessary ingredient to achieve sustained release of the nitrofurantoin" ('473 patent, col. 6, ll. 37-39) and "[c]arboxyvinylpolymer is another necessary ingredient in order to achieve the sustained release pharmaceutical capsules of the present invention" ('473 patent, col. 7, ll. 18-20). "Necessary" means "absolutely needed : required." http://www.merriam-webster.com/dictionary/necessary (visited September 21, 2010).

Upon reading the '473 patent in its entirety (MPEP 2141.02), i.e., taking into account the term "necessary," one of ordinary skill in the art would not have substituted the "necessary" (absolutely needed) controlled release excipients taught in the '473 patent with the instantly claimed controlled release excipients. The '473 patent states that polyvinylpyrrolidone and carboxyvinylpolymer are necessary. The '473 patent does not state that "a controlled release excipient," or some other broad category of excipients, is necessary. Rather, the '473 patent teaches that the specific exicpients polyvinylpyrrolidone and carboxyvinylpolymer are necessary. Thus, the '473 patent does not disclose or suggest any permissible interchangeability of the "necessary" controlled release excipients. In view of this teaching, there was no expectation, and no predictability, that the controlled release excipients could successfully be substituted.

Further, the '473 patent is the only prior art that expressly discloses the active agent nitrofurantoin. One of ordinary skill in the art would not have modified prior art directed specifically to the active agent at issue based on prior art specifying other active agents, particularly when the specific teaching requires the ingredients that are subject to the proposed modification. The '473 patent states that: "[t]he formulation of the present invention, thus formed using the selected polymers, provides a desired drug release profile for nitrofurantoin. " Specification, p. 22, para. 50 (emphasis added).

According the Examiner, applicants attempted to show non-obviousness in the January 15, 2010 Amendment by arguing against the references individually. See Office Action, p. 7 ("Applicant further argues that '359 or '452 and '871 do not disclose nitrofuantoin."). Respectfully, applicants did not argue the references individually. The statement referred to by the Examiner is included in a paragraph which states, in its entirety, that:

> The '359 publication, '452 patent, and '871 patent do not disclose nitrofurantoin. These references do not disclose or suggest any reason to contradict the express

> teaching of the '473 patent that PVP and carboxyvinylpolymer are necessary to achieve sustained release of nitrofurantoin and instead employ the instantly claimed excipients. Accordingly, no combination of the references discloses or suggests the instantly claimed formulation, and this rejection should be withdrawn.

January 15, 2010 Amendment, page 3. Thus, applicants argued that one reference, the '473 patent, discloses the claimed active ingredient (nitrofurantoin), the other references do not disclose nitrofurantoin, and that one would not substitute the "necessary" excipients of the '473 patent in view of the other references.

For the reasons stated above, this rejection should be withdrawn.

Conclusion

This application is believed to be in condition for allowance. If any issues remain which may be addressed by an Examiner's amendment or a supplemental amendment, the Examiner is respectfully requested to contact the undersigned.

Respectfully submitted,

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